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## NATIONAL PHOTOGRAPHIC INTERPRETATION CENTER

25 February 1963

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**MEMORANDUM FOR:** Director, National Reconnaissance Office

**THROUGH:** Deputy Director (Research) (See comment attached)

**SUBJECT:** Utility of Stereo Coverage as Opposed to  
Non-Stereo Coverage

1. In discussions with representatives of your staff, the question has occasionally arisen as to the value of stereoscopic coverage. As far as NPIC is concerned, there is no question that the use of stereo coverage greatly increases both the quality and quantity of readout from photography. For rapid readout and immediate identification of known signatures, monocular viewing is usually adequate. However, for extensive detail work and for accurate and complete analysis, stereo examination is necessary.

2. It is the experience of our photo interpreters that stereo coverage offers the following advantages over non-stereo coverage:



- a. Image enhancement: The stereo viewing enhances the quality of the image as presented on the photography. Therefore, many installations and items can be more readily identified.

Edge definition: Stereo more clearly defines the image being viewed. Not only is edge definition enhanced but also radial displacement and distortion due to relief is overcome to a large degree.

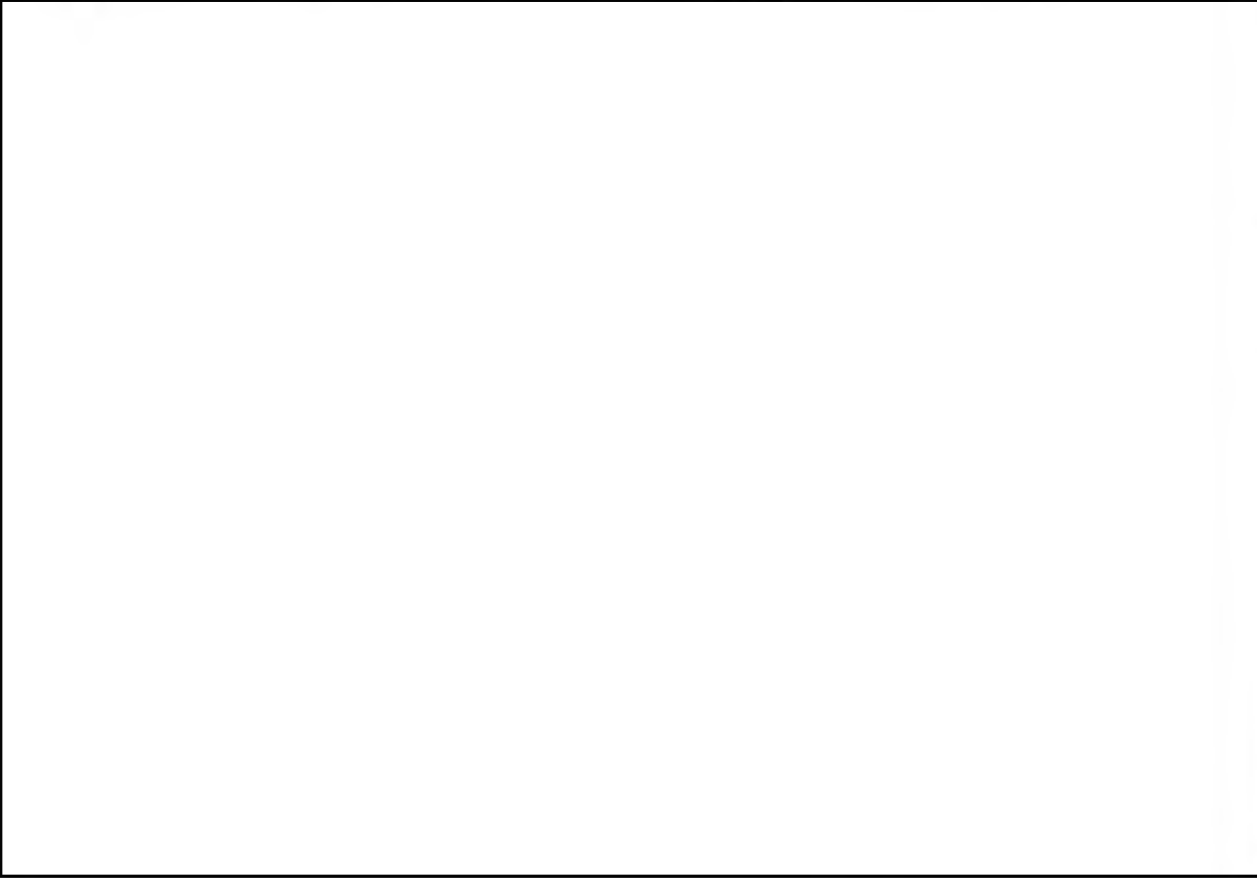
NRO review(s)  
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ORIG (C9#1) to Dr. Chark

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- c. Depth perception: Perception of depth in stereo viewing is a definite asset in a detailed analysis. More positive identifications can be made in stereo coverage due to height and depth factors.
  - d. Provides better perspective of configuration: Often in photography there is a lack of tone and definite shadow, both of which are often good identification features. Stereo capability definitely compensates for such deficiencies, as well as provides better perspective of drainage, terrain and vegetation in relation to logical location of features.
  - e. Increases in useability due to double coverage: Often-times this double coverage factor overcomes a percentage loss in photo interpretation due to haze, clouds and poor quality of single image viewing.

3. Numerous examples of how stereo examination has enhanced NPIC reporting can be cited. Among some of these examples are the following: 25X1



4. It is true that a significant percentage of KH film now being received is never viewed in stereo, due to the absence of areas which require analysis. However, it is practically impossible to state categorically in advance of a mission that stereo is not required over certain areas, because any target, new or old, may require stereo for identification and/or analysis on a given mission. Furthermore, at some future date it is possible that stereo viewers being developed may make it practical to conduct the entire scan operation in stereo.

ARTHUR C. LUNDAHL  
Director

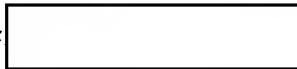
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Distribution:

- Copy 1 - Dir/NRO
- 2 - DD/R✓
- 3 - DD/I
- 4 - SIO/CIA (PID)
- 5 - OD/NPIC
- 6 - OD/NPIC
- 7 - Asst. for P & D

NPIC/OD:



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APPROVED FOR RELEASE

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4 March 1963

COMMENT BY ACTING DEPUTY DIRECTOR (RESEARCH):

The Deputy Director (Research) is in complete agreement with the National Photographic Interpretation Center on the value of stereoscopic coverage. We are quite convinced that the value of stereoscopic coverage has been constantly demonstrated over the years. It is my strong belief that the majority of the high altitude reconnaissance systems under the NRP should have, if at all possible, stereo capability.

EDWARD B. GILLER  
Acting Deputy Director  
(Research)

TOP SECRET

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24 January 1963

MEMORANDUM RE NRO

NRO-1

After 12 months of operation, it appears that the NRO has failed to serve its intended purpose of providing for the management of aerial reconnaissance, manned aircraft and satellites, including ELINT satellites, in a manner which will meet the needs of all agencies carrying a responsibility in this area.

Several deficiencies are apparent to me, including:

1. The agreement does not provide for NRO authority over actual reconnaissance operations. This is evidenced by the fact that during the past year, TACKLE flights over China and North Viet Nam have been planned and executed by CIA under Scoville to meet COMOR requirements with USIB and Special Group approval, but with no NRO direction. The same is true of the India-ChiCom flights. The Cuban overflight program prior to October 14th was handled in this same manner; since October 14th it has been handled through SAC/JCS channels for scheduling and planning purposes with NRO, NPIC and CIA being informed after the plans had been completed. On the other hand,

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flights over China are handled directly by JCS with the Special Group presumably using COMOR targeting but with little input or knowledge on the part of NRO, CIA or the Intelligence Community.

2. NRO responsibilities for programming and budgeting, and the related problem of management of authorized research and development and procurement including the control of appropriated funds, are not well established and are being handled under a compromise arrangement between Secretary McNamara, Secretary Gilpatric and me, with due consideration for differences with respect to the organizations, rather than a clear-cut understanding of a proper and satisfactory course of action.

3. Responsibility for planning the future of reconnaissance, including new and improved satellites, aircraft, drones and the protection of existing satellites against Soviet anti-satellite efforts, is assigned to the NRO with the proviso that all NRO advanced planning be co-ordinated with CIA. I have been informed of little in the way of long-range plans, and therefore, I question whether a sound, aggressive, constructive, forward-looking program is in the mill. The President's Intelligence

Board has also raised this question several times.

4. There is poor linkage between NRO and USIB and, for that matter, DIA. This was abundantly clear when it became apparent that COMOR had not worked out a targeting plan for the first flight of LANYARD scheduled in February, and it developed that the NRO had ruled that, last summer, the COMOR Committee should not be briefed on the LANYARD program for security reasons and hence COMOR (with the exception of its Chairman) knew nothing of LANYARD until the 17th of January.

5. CIA is not a part of NRO except to the extent that they are Executive Agent for NRO programs such as OXCART. CIA representatives have been told by NRO that they are "out of the picture" and that they neither are entitled to, or necessarily should be informed on, NRO plans and programs beyond those for which they are responsible.

For all of these reasons I believe NRO should be reconsidered and a new form of organization worked out on the following lines:

1. NRO should be Executive Agent for a National Reconnaissance Plan (NRP), directed by SecDef and DCI



jointly.

2. NRO should be directed by a DNRO, appointed by SecDef with the approval of DCL. There should be appointed a Deputy DNRO selected from CIA who should be in the chain of command, should be fully and currently informed, should enter into councils and the decisions of NRO, should be responsible for the inter-relationship and liaison between NRO and USIB and its Subcommittee, COMOR, should be Executive Agent for NRO for all projects and operations carried out within CIA, should be fully obliged to secure concurrence of DNRO and keep DNRO currently and fully informed on the developments of such projects and operations and to serve as Acting DNRO in the absence of the Director.

3. NRO should be responsible for all manned aircraft and satellite overflights over denied territory, both photographic and ELINT (but not including peripheral SIGINT operations) and should approve presentations to the Special Group where Special Group approval is required.

4. NRO should be responsible for the planning, research and development of future undertaking, utilizing the

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resources of military departments, CIA and the contractors for such work. Such planning for research and development should be aggressive, imaginative, adequately supported, but not duplicated.

5. NRO should have authority to employ the facilities of the Services, Joint Specified Commands and CIA in the execution of its plans. The NRO, not the agencies, should be the final authority on what is done although the NRO may delegate to the agencies responsibility for various phases of the program.

6. NRO should be responsible for reconnaissance organization, its budgeting, the preparation of the budget and its defense. The manner in which black projects are to be handled before Committees of Congress should be ironed out and, if the House Appropriations Committee agrees to the proposed reorganization of their Committee structure, then it will no longer be necessary to compartment the "CIA black projects" and the DOD projects.

ODCI:JMcCone/HScoville/OSA/jlp

3 copies to DCI

# 4 - AD/OSA - w/orig. draft

# 5 & 6 - DDR



NRO-1

## NATIONAL RECONNAISSANCE ORGANIZATION

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3. NRO responsibilities for programming and budgeting, and the related problem of management of authorized research and development and procurement including the control of appropriated funds, are not well established and are being handled under a compromise arrangement between Secretary McNamara, Secretary Gilpatric and me, with due consideration for differences with respect to the organizations, rather than a clear-cut understanding of a proper and satisfactory course of action.

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4. Responsibility for planning the future of reconnaissance, including new and improved satellites, aircraft, drones and the protection of existing satellites against Soviet anti-satellite efforts, is assigned to the NRO with the proviso that all NRO advanced planning be coordinated with CIA. I have been informed of little in the way of long-range plans, and therefore, I question whether a sound, aggressive, constructive, forward-looking problem is in the mill. The President's Intelligence Board has also raised this question several times.

5. There is poor linkage between NRO and USIB and, for that matter, DIA. This was abundantly clear when it became apparent that COMOR had not worked out a targeting plan for the first flight of LANYARD scheduled in February, and it developed that Dr. Charyk had ruled that, last summer, the COMOR Committee should not be briefed on the LANYARD program for security reasons and hence COMOR (with the exception of its Chairman) knew nothing of LANYARD until the 17th of January.

6. CIA is not a part of NRO except to the extent that it is Executive Agent for NRO programs such as OXCART. CIA representatives are not informed about NRO plans and programs beyond those for which they are responsible, even though these plans and programs may closely relate to those of CIA and obviously have a direct bearing on the DCI's responsibilities for insuring the adequacy of intelligence collection.

7. For all of these reasons I believe NRO should be reconsidered and a new form of organization worked out on the following lines:

a. NRO should be Executive Agent for a National Reconnaissance Plan (NRP), directed by SecDef and DCI jointly and for which both parties shall be responsible.

b. NRO should be directed by a DNRO, appointed by SecDef with the approval of DCI. He shall be responsible to SecDef, devote full time to NRO, and be located in the Pentagon. There should be appointed a Deputy DNRO selected from CIA who should be in the chain of command and serve as Acting DNRO in the absence of the Director. The Deputy DNRO should be fully and currently informed; should be responsible for the inter-relationship and liaison between NRO and USIB and its Subcommittees; should be Executive Agent for all NRO projects and operations carried out within CIA; and should recognize DNRO general responsibilities for all such projects.

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c. NRO should be responsible for all manned aircraft and satellite overflights over denied territory, both photographic and ELINT (but not including peripheral SIGINT operations) and should approve presentations to the Special Group where Special Group approval is required.

d. NRO should be responsible for the planning, research and development of future undertakings, utilizing the resources of military departments, CIA and appropriate contractors for such work. Such research and development should be aggressive, imaginative, and adequately supported.

8. NRO should have authority to employ the facilities of the Military Services, the Joint and Specified Commands and the CIA for execution of its plans and operations. The NRO, not the agencies, should be the final authority on all phases of NRO activities and operations.

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10. The DCI is responsible for the security policy of the NRO as provided by law.

SENDER WILL CHECK CLASSIFICATION TOP AND BOTTOM

<input type="checkbox"/> UNCLASSIFIED	<input checked="" type="checkbox"/> CONFIDENTIAL	<input type="checkbox"/> SECRET
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**CENTRAL INTELLIGENCE AGENCY  
OFFICIAL ROUTING SLIP**

TO	NAME AND ADDRESS	DATE	INITIALS
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<input type="checkbox"/> ACTION	<input type="checkbox"/> DIRECT REPLY	<input type="checkbox"/> PREPARE REPLY
<input type="checkbox"/> APPROVAL	<input type="checkbox"/> DISPATCH	<input type="checkbox"/> RECOMMENDATION
<input type="checkbox"/> COMMENT	<input type="checkbox"/> FILE	<input type="checkbox"/> RETURN
<input type="checkbox"/> CONCURRENCE	<input type="checkbox"/> INFORMATION	<input type="checkbox"/> SIGNATURE

Remarks:

FOLD HERE TO RETURN TO SENDER

FROM: NAME, ADDRESS AND PHONE NO.	DATE
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DDCI

30 Jan 63

<input type="checkbox"/> UNCLASSIFIED	<input type="checkbox"/> CONFIDENTIAL	<input type="checkbox"/> SECRET
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30 January 1963

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MEMORANDUM FOR: Executive Director

30 JAN 31 1963

FROM : Deputy Director of Central Intelligence

The Director just called (2:15, 30 January) and stated that he had taken up with Mr. Gilpatric only two of the subjects you had prepared for him:

a. Mr. Gilpatric thought the NRO program as proposed was fine and was prepared to implement it in toto, to include having the CIA deputy directly in the NRO chain of command on an operating basis as a true deputy. Gilpatric did not think that the Director of NRO had to mandatorily be on a full-time basis but certainly had to spend more time at it than Dr. Charyk. The Director gave Mr. Gilpatric the paper.

b. Mr. Gilpatric agreed to the Director's paper on NPIC and the Director gave him the paper.

The other subjects were not discussed since the Director wished to study them a little more and put them more in his own phraseology. I have sent you a separate copy of my memorandum to Bross relative the repayment for Vietnam expenses which the Director did discuss with Gilpatric.

MSC

MSC:blp

Distribution:

Original - Addressee

1 - DDCI

1 - ER

1 - EA/DCI

1 - DD/I

1 - DD/R

1 - Comptroller

1 - OSA/Thompson



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*National Reconnaissance Organization*  
~~MEMORANDUM RE NRO~~

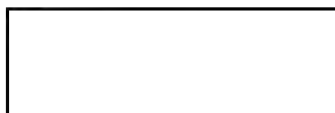
~~24 January 1963~~

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Page 4

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~~informed on the developments of such projects and~~

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10. <sup>The</sup> ~~A~~ <sup>is</sup> ~~responsible~~ <sup>the</sup> ~~for~~ <sup>policy</sup> ~~the NRO~~ as provided by law.